

pattern-propagation factor (radar). Ratio of the strength that is actually present at a point in space to that which would have been present if free space propagation had occurred with the antenna beam directed toward the point in question. This factor is used in the radar equation to modify the strength of the transmitted or received signal to account for the effect of multipath propagation, diffraction, refraction, and pattern of an antenna. 13

pattern recognition. The identification of shapes, forms, or configurations by automatic means. 255, 77

pattern-sensitive fault. A fault that appears in response to some particular pattern of data. 255, 77

PAX (telephony). *See:* private automatic exchange.

pay station. *See:* public telephone station.

P-band radar. Occasionally used to denote the 420 megahertz (MHz) to 450 MHz International Telecommunications Union assigned band, more generally described as the ultrahigh frequency (UHF) band. 13

PBX. *See:* private branch exchange.

PBX trunk. *See:* private-branch-exchange trunk.

p-channel device (metal-nitride-oxide field-effect transistor). Insulated-gate field-effect transistor (IGFET) where source and drain are regions of p-type conductivity. 386

PCS. *See:* plastic clad silica. 433

P.D. *See:* control action, proportional plus derivative.

P-display (radar). A type of radar display format, more commonly called plan position indication (PPI). *See:* display. 13

PDM. *See:* pulse-duration modulation.

PEAK. Channel number corresponding to the peak of a distribution. *See:* crest. 117

peak (crest) restriking voltage (surge arresters). The maximum instantaneous voltage that is attained by the re-striking voltage. 308, 62

peak alternating gap voltage (electron tube) (traveling-wave tubes). The negative of the line integral of the peak alternating electric field taken along a specified path across the gap. *Note:* The path of integration must be stated. *See:* electron devices, miscellaneous. 190, 125

peak anode current. The maximum instantaneous value of the anode current. *See:* electronic controller. 206

peak burst magnitude (audio and electroacoustics). The maximum absolute peak value of voltage, current, or power for a burstlike excursion. *See:* The figure attached to the definition of burst duration. *See:* burst (audio and electroacoustics). 253, 176

peak cathode current (steady-state). The maximum instantaneous value of a periodically recurring cathode current. 125

peak-charge characteristic (nonlinear capacitor). The function relating one-half the peak-to-peak value of transferred charge in the steady state to one-half the peak-to-peak value of a specified applied symmetrical

alternating capacitor voltage. *Note:* Peak-charge characteristic is always single-valued. *See:* nonlinear capacitor. 191

peak current (low-voltage dc power circuit breakers used in enclosures). The instantaneous value of current at the time of its maximum value. 401

peak detector (1). A detector, the output voltage of which approximates to the true peak value of an applied signal. *See:* electromagnetic compatibility. 220, 199

(2) (overhead-power-line corona and radio noise). A detector, the output voltage of which approximates the true peak value of an applied signal or noise. 411

peak distortion (data transmission). The largest total distortion of telegraph signals noted during a period of observation. 59

peak electrode current (electron tube). The maximum instantaneous current that flows through an electrode. *See:* electrode current (electron tube). 190

peak flux density. The maximum flux density in a magnetic material in a specified cyclically magnetized condition. 331

peak forward anode voltage (electron tube). The maximum instantaneous anode voltage in the direction in which the tube is designed to pass current. *See:* electrode voltage (electron tube); electronic controller. 190

peak forward current rating (repetitive) (rectifier circuit element). The maximum repetitive instantaneous forward current permitted by the manufacturer under stated conditions. *See:* average forward current rating (rectifier circuit element). 237, 66, 208

peak forward voltage (of a rectifying element). The maximum instantaneous voltage between the anode and cathode during the positive nonconducting period. *See:* rectification. 328

peak induction (of toroidal magnetic amplifier cores). The magnetic induction corresponding to the peak applied magnetizing force specified. *Note:* It will usually be slightly less than the true saturation induction. *Syn.* peak flux density. 170

peaking circuit. A circuit capable of converting an input wave into a peaked waveform. 328

peaking network. A type of interstage coupling network in which an inductance is effectively in series (series peaking network) or in shunt (shunt peaking network) with the parasitic capacitance to increase the amplification at the upper end of the frequency range. *See:* network analysis. 328

peaking time (semiconductor radiation detectors). The time elapsed from the first zero crossing of the defined zero level to the departure from peak amplitude of a pulse equal to the maximum rated amplifier output. 23

peak inrush current (electronics power transformer). The peak instantaneous current value resulting from the excitation of the transformer with no connected load, and with essentially zero source impedance, and using the minimum turns primary tap and rated voltage. 95

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